

**Amendments to the Claims:**

Please amend Claims 1, 3 and 10 and cancel Claims 12, 16 and 75. This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

1                   1 (currently amended): An isolated nucleic acid encoding an Sitosterolemia  
2   Susceptibility Gene (SSG) polypeptide, said polypeptide comprising an amino acid sequence that  
3   is at least ~~about 70%~~ 75% identical to the full-length of an amino acid sequence as set forth in  
4   SEQ ID NO:3, wherein said amino acid sequence comprises ~~a sequence selected from the group~~  
5   ~~consisting of SEQ ID NO:5 and SEQ ID NO:6~~ an ATP-binding cassette (ABC) family sterol  
6   transporter.

1                   2 (previously presented): The nucleic acid of claim 1, wherein said polypeptide  
2   specifically binds to polyclonal antibodies generated against a polypeptide that comprises an  
3   amino acid sequence selected from the group consisting of SEQ ID NO:3, SEQ ID NO:5 and  
4   SEQ ID NO:6.

1                   3 (currently amended): The nucleic acid of claim 1, wherein said polypeptide  
2   comprises an amino acid sequence ~~selected from the group consisting of~~ as set forth in SEQ ID  
3   NO:3, ~~SEQ ID NO:5 and SEQ ID NO:6.~~

1                   4 (original): The nucleic acid of claim 1, wherein said polypeptide forms a dimer  
2   with a second ABC polypeptide, and wherein said dimer exhibits sterol transport activity.

1                   5 (original): The nucleic acid of claim 4, wherein said dimer is a heterodimer.

1                   6 (original): The nucleic acid of claim 4, wherein said sterol is cholesterol.

1                   7 (previously presented): The nucleic acid of claim 5, wherein said second ABC  
2 polypeptide is ATP-Binding Cassette 8 (ABC8).

1                   8 (previously presented): The nucleic acid of claim 1, wherein said nucleic acid  
2 hybridizes under moderately stringent hybridization conditions comprising 40% formamide, 1M  
3 NaCl, 1% SDS at 37°C and wash conditions of 1x SSC at 45°C to a nucleic acid comprising a  
4 nucleotide sequence as set forth in SEQ ID NO:4.

1                   9 (previously presented): The nucleic acid of claim 8, wherein said nucleic acid  
2 hybridizes under stringent hybridization conditions comprising 50% formamide, 5x SSC, 1%  
3 SDS at 65°C and wash conditions of 0.2x SSC, 0.1% SDS at 65°C to a nucleic acid comprising a  
4 nucleotide sequence as set forth in SEQ ID NO:4.

1                   10 (currently amended): The nucleic acid of claim 1, wherein said nucleic acid  
2 comprises a nucleotide sequence at least ~~about 70%~~ 80% identical to the full-length of a  
3 sequence as set forth in SEQ ID NO:4.

1                   11 (previously presented): The nucleic acid of claim 1, wherein said nucleic acid  
2 comprises a nucleotide sequence as set forth in SEQ ID NO:4.

12 (canceled)

1                   13 (original): The nucleic acid of claim 1, wherein said nucleic acid is from a  
2 mouse or a human.

1                   14 (original): The nucleic acid of claim 1, wherein said nucleic acid is expressed  
2 in the intestine or in the liver in the presence of an LXR agonist.

1                   15 (original): The nucleic acid of claim 1, wherein said nucleic acid is expressed  
2 in a tissue selected from the group consisting of liver, jejunum, ileum, and duodenum.

16 (canceled)

1                   17 (original): An expression cassette comprising the nucleic acid of claim 1  
2 operably linked to a promoter.

1                   18 (original): An isolated cell comprising the expression cassette of claim 17.

1                   19 (withdrawn): An isolated SSG polypeptide, said polypeptide comprising an  
2 amino acid sequence that is at least about 70% identical to an amino acid sequence as set forth in  
3 SEQ ID NO:1 or 3.

1                   20 (withdrawn): The isolated polypeptide of claim 19, wherein said polypeptide  
2 selectively binds to polyclonal antibodies generated against a polypeptide comprising an amino  
3 acid sequence as set forth in SEQ ID NO:1 or 3.

1                   21 (withdrawn): The isolated polypeptide of claim 19, wherein said polypeptide  
2 comprises an amino acid sequence as set forth in SEQ ID NO:1 or 3.

1                   22 (withdrawn): The isolated polypeptide of claim 19, wherein said polypeptide  
2 forms a dimer with a second ABC polypeptide, and wherein said dimer exhibits sterol transport  
3 activity.

1                   23 (withdrawn): The isolated polypeptide of claim 22, wherein said dimer is a  
2 heterodimer.

1                   24 (withdrawn): The isolated polypeptide of claim 23, wherein said second ABC  
2 polypeptide is ABC8.

1                   25 (withdrawn): The isolated polypeptide of claim 22, wherein said sterol is  
2 cholesterol.

1                   26 (withdrawn): The isolated polypeptide of claim 19, wherein said polypeptide  
2 is expressed in the intestine or in the liver in the presence of an LXR agonist.

1                   27 (withdrawn): The isolated polypeptide of claim 19, wherein said polypeptide  
2 is expressed in a tissue selected from the group consisting of the liver, jejunum, ileum, and  
3 duodenum.

1                   28 (withdrawn): The isolated polypeptide of claim 29, wherein said polypeptide  
2 is from a mouse or a human.

1                   29 (withdrawn): An antibody generated against the isolated polypeptide of  
2 claim 19.

1                   30 (withdrawn): An isolated SSG polypeptide, said polypeptide comprising an  
2 amino acid sequence selected from the group consisting of SEQ ID NO:5 and SEQ ID NO:6.

1                   31. (original) A method of making an SSG polypeptide, the method comprising:  
2 (i) introducing a nucleic acid of claim 1 into a host cell or cellular extract; and  
3 (ii) incubating said host cell or cellular extract under conditions such that said  
4 SSG polypeptide is expressed in the host cell or cellular extract.

1                   32. (original) The method of claim 31, further comprising recovering the SSG  
2 polypeptide from the host cell or cellular extract.

1                   33 (withdrawn): A method of identifying a compound useful in the treatment or  
2 prevention of a sterol-related disorder, said method comprising contacting an SSG polypeptide  
3 with a test agent, and determining the functional effect of said test agent upon said polypeptide,  
4 wherein a functional effect exerted on said polypeptide by said test agent indicates that said test  
5 agent is a compound useful in the treatment or prevention of said sterol-related disorder.

1                   34 (withdrawn): The method of claim 33, wherein said sterol is cholesterol.

1                   35 (withdrawn): The method of claim 33, wherein said polypeptide comprises an  
2 amino acid sequence that is at least about 70% identical to an amino acid sequence as set forth in  
3 SEQ ID NO:1 or 3.

1                   36 (withdrawn): The method of claim 33, wherein said polypeptide is present in  
2 a cell or cell membrane.

1                   37 (withdrawn): The method of claim 33, wherein said polypeptide is bound to a  
2 heterologous ABC polypeptide, forming a heterodimer.

1                   38 (withdrawn): The method of claim 33, wherein said functional effect  
2 comprises an increase in the sterol transport activity of said polypeptide.

1                   39 (withdrawn): The method of claim 33, wherein said functional effect  
2 comprises a physical interaction between said test agent and said polypeptide.

1                   40 (withdrawn): The method of claim 39, wherein said physical interaction is  
2 detected using a direct binding assay.

1                   41 (withdrawn): The method of claim 33, wherein said sterol-related disorder is  
2 sitosterolemia.

1                   42 (withdrawn): The method of claim 33, wherein said sterol-related disorder is  
2 selected from the group consisting of hypercholesterolemia, hyperlipidemia, gall stones, HDL  
3 deficiency, atherosclerosis, and nutritional deficiencies.

1                   43 (withdrawn): A method of identifying a compound useful in the treatment or  
2 prevention of a sterol-related disorder, said method comprising contacting with a test agent a cell  
3 that expresses or is capable of expressing an SSG polypeptide, and determining the functional  
4 effect of said test agent upon said cell;

5                    wherein a functional effect exerted on said cell by said test agent indicates that  
6                    said test agent is a compound useful in the treatment or prevention of said sterol-related disorder.

1                    44 (withdrawn): The method of claim 43, wherein said sterol is cholesterol.

1                    45 (withdrawn): The method of claim 43, wherein said SSG polypeptide  
2                    comprises an amino acid sequence that is at least about 70% identical to an amino acid sequence  
3                    as set forth in SEQ ID NO:1 or 3.

1                    46 (withdrawn): The method of claim 43, wherein said compound produces an  
2                    increase in the expression of an SSG gene that encodes said SSG polypeptide.

1                    47 (withdrawn): The method of claim 46, wherein said increase in the expression  
2                    of said SSG gene is detected by detecting the level of SSG mRNA in said cell.

1                    48 (withdrawn): The method of claim 46, wherein said increase in the expression  
2                    of said SSG gene is detected by detecting the level of SSG polypeptide in said cell.

1                    49. (withdrawn): The method of claim 46, wherein said increase in the  
2                    expression of said SSG gene is detected by detecting the level of SSG protein activity in said  
3                    cell.

1                    50 (withdrawn): The method of claim 43, wherein said compound modulates the  
2                    level of sterol transport activity in said cell.

1                    51 (withdrawn): The method of claim 50, wherein said sterol transport activity in  
2                    said cell is detected by detecting the rate of sterol efflux in said cell.

1                    52 (withdrawn): The method of claim 51, wherein said sterol is cholesterol.

1                    53 (withdrawn): The method of claim 46, wherein said increase in the expression  
2                    of said SSG gene is mediated by LXR or RXR.

1                   54 (withdrawn): The method of claim 43, wherein said sterol-related disorder is  
2 sitosterolemia.

1                   55 (withdrawn): The method of claim 43, wherein said sterol-related disorder is  
2 selected from the group consisting of hypercholesterolemia, hyperlipidemia, gall stones, HDL  
3 deficiency, atherosclerosis, and nutritional deficiencies.

1                   56 (withdrawn): A method of treating or preventing a sterol-related disorder in a  
2 mammal, said method comprising administering to said mammal a compound that increases the  
3 level of expression or activity of an SSG polypeptide in a plurality of cells of said mammal.

1                   57 (withdrawn): The method of claim 56, wherein said sterol is cholesterol.

1                   58 (withdrawn): The method of claim 56, wherein said sterol-related disorder is  
2 sitosterolemia.

1                   59 (withdrawn): The method of claim 56, wherein said sterol-related disorder is  
2 selected from the group consisting of hypercholesterolemia, hyperlipidemia, gall stones, HDL  
3 deficiency, atherosclerosis, and nutritional deficiencies.

1                   60 (withdrawn): The method of claim 56, wherein said compound produces a  
2 decrease in the amount of dietary sterol that is absorbed in said mammal.

1                   61 (withdrawn): The method of claim 56, wherein said compound produces a  
2 decrease in the amount of sterol that is retained in the liver of said mammal.

1                   62 (withdrawn): The method of claim 56, wherein said compound is identified  
2 using the method of claim 33 or 43.

1                   63 (withdrawn): The method of claim 56, wherein said compound causes an  
2 increase in LXR or RXR activity within cells of said mammal.

1                   64 (withdrawn): A method of prescreening to identify a candidate therapeutic  
2 agent that modulates SSG activity in a mammal, the method comprising:  
3                   providing a cell which comprises an SSG polypeptide; and  
4                   a test compound; and  
5                   determining whether the amount of sterol transport activity in said cell is  
6 increased or decreased in the presence of the test compound relative to the activity in the absence  
7 of the test compound;  
8                   wherein a test compound that causes an increase or decrease in the amount of  
9 sterol transport activity is a candidate therapeutic agent for modulation of SSG activity in a  
10 mammal.

1                   65 (withdrawn): The method of claim 64, further comprising a secondary step,  
2 wherein said test compound is administered to a mammal, and the absorption of dietary sterol in  
3 said mammal is detected.

1                   66 (withdrawn): A method of inducing the expression of an ABC gene in a  
2 mammalian cell, said method comprising increasing the level of LXR or RXR activity in said  
3 cell.

1                   67 (withdrawn): The method of claim 66, wherein said ABC gene encodes a  
2 protein that is involved in the transport of a sterol.

1                   68 (withdrawn): The method of claim 67, wherein said ABC gene is selected  
2 from the group consisting of SSG, ABC1 and ABC8.

1                   69 (withdrawn): The method of claim 67, wherein said sterol is cholesterol.

1                   70 (withdrawn): The method of claim 66, wherein said LXR or RXR activity is  
2 increased by administering an LXR or RXR agonist to said cell.



1                   71 (withdrawn): The method of claim 66, wherein said cell is present in a  
2 mammal.

1                   72 (withdrawn): The method of claim 66, wherein said cell is a liver, intestinal,  
2 or kidney cell.

1                   73 (withdrawn): An isolated nucleic acid comprising at least one nucleotide  
2 sequence selected from the group consisting of exon 1 (SEQ ID NO:7), exon 2 (SEQ ID NO:8),  
3 exon 3 (SEQ ID NO:9), exon 4 (SEQ ID NO:10), exon 5 (SEQ ID NO:11), exon 6 (SEQ ID  
4 NO:12), exon 7 (SEQ ID NO:13), exon 8 (SEQ ID NO:14), exon 9 (SEQ ID NO:15), exon 10  
5 (SEQ ID NO:16), exon 11 (SEQ ID NO:17), exon 12 (SEQ ID NO:18) and exon 13 (SEQ ID  
6 NO:19).

1                   74 (withdrawn): The isolated nucleic acid sequence of claim 73, further  
2 comprising at least one intron.

75 (canceled)

1                   76 (previously presented): The nucleic acid of claim 1, wherein said amino acid  
2 sequence is at least about 90% identical to said amino acid sequence set forth in SEQ ID NO:3.

1                   77 (previously presented): The nucleic acid of claim 1, wherein said amino acid  
2 sequence is at least about 95% identical to said amino acid sequence set forth in SEQ ID NO:3.